Student Evaluation

Alberta
EDUCATION

REPORT OF THE AD HOC STUDENT EVALUATION

TECHNICAL ADVISORY COMMITTEE

June 15, 1983

TABLE OF CONTENTS

FOREWORD

In January of 1983, an Ad Hoc Student Evaluation Technical Advisory Committee was struck with the purpose of reviewing the technical aspects of the provincial Student Evaluation Program and making appropriate recommendations to the Director of Student Evaluation of Alberta Education. The terms of reference for the committee are presented in Appendix I.

Five meetings were held in which the committee reviewed the procedures used by the Branch in the development, administration, and scoring of examinations. The committee also scrutinized the reporting of achievement test results significant at the provincial and local levels. At these meetings, Branch personnel knowledgeable in various aspects of the procedures described the work that had been done, with particular attention to the ways in which various testing elements had evolved.

While the mandate of the committee extended to the investigation of all student evaluation programs, it became clear that only the achievement testing program was sufficiently well developed to warrant review. It is hoped, however, that some of the recommendations contained in this report will be useful for other programs. As a result of these deliberations, the committee's general view was that the Student Evaluation Branch was doing an excellent job of conducting the achievement testing program, within the time and personnel constraints that were imposed. Several areas, however, were identified as needing improvement. These areas are described in the remainder of the report. The recommendations were made within the constraints of the Ministerial mandate requiring that achievement test results be valid at the jurisdiction level.

The report addresses eight distinct categories: the test development process, sampling, test security, test equating, standard setting, reporting of results, the achievement testing schedule, and operational studies in testing techniques. Recommendations are made within each category, and the rationale for each recommendation is provided.

Finally, the report evolved from a consensus-seeking process: the committee members discussed, debated, and compromised on specific points, recognizing that the report served primarily an advisory purpose. Thus, the report does not wholly reflect the position of any one committee member or referent group. The committee hopes that this report will result in an increased understanding of the technical aspects of testing that will ultimately lead to better practices.

J. Lawrence Tymko
Committee Chairman

ACKNOWLEDGEMENTS

This report, prepared for the Director of Student Evaluation Branch, could not have been completed without the assistance of numerous individuals. Particular acknowledgement is given to committee members Willard Brooks from the Alberta Teachers' Association, Janelle Holmes from the Calgary Board of Education, Thomas Maguire from the University of Alberta, Harry Mosychuk from Edmonton Public Schools, Walter Unruh from the University of Calgary, and Michael Kozlow, David Wasserman, and Patricia Lynkowsky Ford from the Student Evaluation Branch. Their participation and consultation is much appreciated.

Appreciation is also extended to Larry Ferguson from the Alberta School Trustees' Association, and Eric Mokosch and Ritchie Whitehead from the University of Lethbridge for their input.

ISSUES AND RECOMMENDATIONS

1. Test Development Process

1.1 Issue

Name of the Technical Review Committee

The name "Technical Review Committee" does not reflect the function of the committee, which is to review the tests from all perspectives, not only from the technical point of view. This committee also examines various phases of the testing process in addition to the test itself.

Recommendation

That the name of the Technical Review Committee be changed to the Examination Review Committee.

1.2 Issue

Function of the Testing Review Committee

Currently there is no requirement for a comprehensive review of the final form of a test. The Examination Review Committee should provide a final check on the quality of the test before it is administered. The review of each item and a check on its match with the blueprint category will ensure, insofar as is possible, high content validity.

Recommendation

That recommendation for formal approval of the final form be added to the functions of the Examination Review Committee as identified in the document "Examination Development Process" (Appendix III). This function involves reaching consensus on each of the following:

- *individual items*
- *match of test to blueprint*
- *test organization and format*
- *reporting categories*
- *administration instructions*

1.3 Issue

Teacher representation on the Examination Review Committee

Teacher representation on the Examination Review Committee will help ensure that the achievement tests reflect program implementation. Although teachers construct the original items, these items often undergo significant revisions before appearing on the final form of the test. Therefore, it is important to have practising teachers on the committee reviewing the final form of the test.

Recommendation

That the number of teacher representatives nominated by the ATA be increased to three, at least one of whom is currently teaching the specific content covered by the test.

1.4 Issue

Technical advice for test development

It is necessary to ensure high technical merit of instruments used in the achievement testing program. Procedures used in the development, validation, and administration of tests should be reviewed periodically, and revised to reflect current developments in psychometrics. The number of people in the Branch who have the technical skills required is small and their time is limited. The Branch procedures should be reviewed periodically by testing specialists external to the Branch. In addition to providing an external review, these experts can also augment the technical capability of the Branch when needed.

Recommendation

That a Technical Advisory Committee (TAC) of individuals knowledgeable in testing be established to conduct periodic reviews of testing procedures and to serve on Examination Review Committees.

2. Sampling

2.1 Issue

Student sampling

The mandate of the Branch requires that results be valid at the jurisdiction level. For larger jurisdictions this can be achieved by sampling. Sampling by class or by student could result in motivation problems in schools where some students are writing and some are not, and sample selection is complicated by difficulty in defining a class unit. Using the school as a sampling unit overcomes these problems and also simplifies the sampling and test administration procedures.

Recommendation

That each jurisdiction with a sufficient number of schools be allowed to choose to test all students or to test a sample selected on a school basis.

2.2 Issue

Curriculum sampling

The SEB must provide information that can be used to make decisions affecting curriculum design and implementation, and resource allocation. This information must provide for a broad range of topics within each content area. Matrix sampling allows for more items to be used, thus covering a broader spectrum of the curriculum and increasing content validity. In addition, each specific topic will be covered by more items. A larger pool of items could be released, and some items retained for test equating over time. Valid jurisdiction and student results can still be reported.

Recommendation

That the Achievement Testing Program be implemented through the use of matrix sampling, with multiple test forms sharing a common set of items.

3. Test Security

3.1 Issue

Release of tests after administration

It is relatively easy to maintain test security until it is administered. Once an examination is administered it can no longer be considered secure. Release of the tests will make jurisdiction results more meaningful and enhance the credibility of results. The tests can provide models for teacher-made tests in the province. Once the pool of items used on tests becomes large, some previously used items can be used on tests without invalidating results.

Recommendation

That achievement tests not be secured after they have been administered.

4. Test Equating

4.1 Issue

Providing for comparison of test results between different tests in a particular subject area

It is part of the mandate of SEB to monitor achievement on a long-term basis. This is taken to mean that trends in student achievement over several years should be monitored and described. To accomplish this, equating procedures will be required to compare one year's performance in a given subject area to that of a previous year or administration. If tests are not secured after administration, this cannot be accomplished by repeating items on successive tests. Therefore, equivalent items must be constructed and equated at the field testing stage. If matrix sampling is used, a small number of items could be secured for test equating purposes. Once the item pools become large, a small number of previously released items can be used for test equating.

Recommendation

That test equating be accomplished through field testing procedures.

5. Standard Setting

5.1 Issue

Defining "Standards"

The notion of standards is a deceptively simple one in that when we talk about standards in education, we usually make the assumption that we all mean the same thing. When we refer to standards of student performance, we are talking about a "measure of what (student performance) is adequate for some purpose." When educators are required to set measurable performance standards, the complexity becomes apparent. When measurable standards are defined as the requirement, a quest for sensible standard setting procedures may begin. Until a common understanding of the function and nature of standards is achieved, it is not possible to agree on how they are to be measured.

Recommendation

That SEB clarify and communicate its position regarding standards of student performance.

5.2 Issue

Procedures for establishing acceptable levels of achievement

Now that educators are being called on to deal openly with the question of standards, they realize there is no generally acceptable procedure for setting standards for achievement tests. While the SEB can supply provincial averages to which jurisdictions can compare their results, these averages are not sufficient as standards because they do not provide a basis for judging whether provincial performance is acceptable, nor do they allow for comparisons of achievement between different subtests. The performance of a jurisdiction is not necessarily satisfactory by virtue of the fact that its average is above the provincial average, nor unsatisfactory if its average is lower than the provincial average. Therefore some attempt must be made to establish standards that are not solely based on test results. This procedure should involve teachers because they are in an excellent position to judge what can be expected of students on particular examinations.

Alberta
EDUCATION

Devonian Building, West Tower, 11160 Jasper Avenue, Edmonton, Alberta, Canada T5K 0L2

June 16, 1983

TO: ALL MEMBERS OF THE AD HOC STUDENT
EVALUATION TECHNICAL ADVISORY COMMITTEE

RE: FINAL REPORT OF THE TECHNICAL ADVISORY COMMITTEE

Enclosed is a copy of the final report of the Ad Hoc Student Evaluation Technical Advisory Committee submitted to Dr. Lloyd Symyrozum, Director of Student Evaluation, Alberta Education.

I wish to take this opportunity to thank you on behalf of Dr. Symyrozum and myself for your enthusiastic and constructive contributions in preparing this report. The recommendations put forth by the Committee will have significant implications for testing programs of Alberta Education, and your invaluable contributions are greatly appreciated.

I would also like to extend to you my personal thanks for accepting the invitation to participate in this project. I am confident I share the feelings of all when I say that I found the experience enjoyable as well as productive.

Once again, thank you all for giving so generously of your time and effort. Have a good summer.

Sincerely,

J. Lawrence Tymko
Chairman
Ad Hoc Student Evaluation Technical
Advisory Committee

Recommendations

1) *That SEB adopt some procedure involving teachers for setting standards for all achievement tests.*

2) *That the TIFSS proposal (Appendix II) be tested on a trial basis.*

6. Reports

6.1 Issue

Reporting of results

Release of reports composed entirely of statistical information leaves consumers without a basis for interpretation. Data tables are difficult to understand without some description, and results are subject to misinterpretation without guidelines. The results ought to be reported in a fashion that makes clear the significance of the results to the various publics.

Recommendation

That reports of results include guidelines for interpretation and use.

7. Achievement Testing Schedule

7.1 Issue

Scheduling of achievement tests

Administration of two achievement tests at the same grade level in a given year poses problems. Because of the time required, the motivation problems may be compounded. This may also result in teacher objections.

Recommendation

That any grade be required to write only one achievement test in a given year.

8. Research in Testing

8.1 Issue

Providing for the investigation of operational and technical problems in testing

There are many new developments in measurement with potential for improving the validity and utility of achievement tests. In some cases the new techniques can be applied directly, but in most cases they need to be evaluated and adapted to SEB requirements. In addition, there are certain operational problems that require investigation in order to reach satisfactory solution. Feasibility studies are required so that resources are applied appropriately. For example, the following areas need investigation:

- item format and scoring procedures
- sampling procedures
- standard setting
- item calibration
- alternate approaches to establishing validity
- effectiveness of alternative reporting procedures
- test equating

Recommendation

That the SEB conduct internal projects to satisfy immediate needs and supervise external projects to satisfy long range needs.

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APPENDIX I

AD HOC STUDENT EVALUATION TECHNICAL ADVISORY COMMITTEE

An ad hoc technical advisory committee will be established for the Student Evaluation Branch.

Purpose

The purpose of the Committee will be to review the technical aspects of the Student Evaluation Program and to make such recommendations as it deems appropriate to the Director of Student Evaluation of Alberta Education.

Terms of Reference

The Committee, under the chairmanship of an Associate Director of the Student Evaluation Branch, will review and advise on any technical aspect of student evaluation referred to it by the Director of Student Evaluation, Alberta Education.

Structure of the Committee

The Committee will be composed of:

1. A chairman and two other members appointed by the Director of Student Evaluation
2. A selected representative from each of the University of Alberta, the University of Calgary, and the University of Lethbridge
3. A selected representative from the Alberta School Trustees' Association
4. A selected representative from the Alberta Teachers' Association
5. A selected representative from each of the Edmonton and Calgary public school districts

Background

During the past two years, the Student Evaluation Branch has constructed, administered, and reported on one round of the Achievement Testing Program, and is in to the first round of the Comprehensive Examinations Program. At the present time, revisions are being made to both programs, and therefore it appears to be an appropriate time to conduct a review of the technical aspects of the student evaluation programs.

Purpose

The purpose of the technical advisory committee is to examine the technical aspects of the student evaluation programs and to make recommendations for future practice. Amongst the aspects to be examined are the following:

A. The process of test construction, including:
    1. the development and use of curriculum specifications
    2. the validity of test blueprints
    3. the appropriateness and usefulness of field testing, and the use of field test information in item revision
    4. the quality of items as evidenced by content validity information, difficulty levels, discrimination indices
    5. the quality of the finished instrument, including time limits, test statistics, test efficiency, and validity

B. Validity and efficiency of administration and scoring, including:
    1. timing of the test in the academic year
    2. distribution of test materials
    3. sampling procedures

4. process of returning completed examinations

5. reliability of scoring (essay and multiple-choice)

6. validity of scoring

7. efficiency of scoring

C. Utility and appropriateness of reporting procedures, including:

1. utility of standards

2. validity of standards and interpretation bands

3. readability of reports

4. timeliness of reports

D. Psychometric quality of tests

Procedures

The Ad Hoc Technical Advisory Committee will be composed of people who are knowledgeable and interested in psychometrics. They will undertake to review the work of the Student Evaluation Branch from a psychometric perspective, keeping in mind curriculum concerns. It is anticipated that most, if not all, of the materials to be reviewed are available. In some instances it may be necessary to interview people who are involved in various test construction projects, but for the most part, members of the advisory committee who are on staff in the Branch will be able to provide the needed information.

In making recommendations, the ad hoc advisory committee should be mindful of the policy, budget, and time constraints that surround the student evaluation programs and try to be as specific and practical as possible.

The review process will involve general meetings to discuss the testing programs as a whole, and subgroup meetings to deal with the various tests and their results.

Timeline

A preliminary report should be prepared for the Director by May 15, 1983. Following this, discussions between the ad hoc committee and the Director should take place at which recommendations can be revised. The final report will be completed by June 15, 1983.

SEB 1983 02 01

APPENDIX II

TIFSS: A Proposal

(Teacher Input For Setting Standards)

A continuing problem in our achievement testing program is the determination of standards against which to interpret test results. The people who should be most knowledgeable about the level of achievement that can be reasonably expected from students in a course are those teachers teaching the course. The purpose of this document is to outline a procedure which will involve a large number of teachers in the standard setting process.

It is proposed that all teachers whose class or classes are writing an achievement test be required to complete a form on which they would record the following for a portion of the multiple-choice items on the test:

A. The alternative the teacher believes to be correct;

B. The percentage (0-20, 21-40, 41-60, 61-80, 81-100) of students the teacher believes will select the correct alternative; and

C. The percentage (same scale as B) of students taking the course in the province that should be able to select the correct alternative.

It is important to have teachers identify the correct response in order to ensure that they read the question and alternatives carefully. This will give them a better understanding of what is required of the students to answer the question.

Each teacher would respond to 15 - 25 items. There will be three to five color-coded versions of the teacher response form for each test. Any one school will receive only one version of the teacher responses form and the versions will be randomly distributed among schools. Each school will receive one teacher response form per class. This procedure should ensure that at least 120 teachers will rate each item.

The resulting data can be used in conjunction with test results and the judgments of other professionals to help determine acceptable levels of achievement on the test.

ITEM RATING FORM

Grade 6 Mathematics

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In this year's testing program, we would like to involve all practising teachers in the determination of standards against which results may be interpreted. We feel that teachers of a given course are the most knowledgeable about the level of achievement that can be reasonably expected of the students in that course. Therefore, we are asking each teacher who has a class writing a test to estimate expected levels of achievement for some multiple-choice items. You are asked to respond to the set of items identified on the next page. These estimates will be considered in the setting of target averages for each of the subtests. We are also asking teachers to identify the correct response as a further check on item validity.

Instructions

Please fill out the following information on the attached form:

1. Place a check mark in the appropriate space to indicate whether your class is above average, average, or below average. If you teach more than one class, think of all your students as a single group and fill out the form for that larger group.

2. Give the following information for each multiple-choice item identified:

   a) Circle the number below the letter corresponding to the correct response.

   b) Estimate the percentage of your students that you feel will choose the correct response. Circle the number below the appropriate percentage range under the heading "% in class that will get item correct."

   c) Estimate the percentage of students in the province that you feel should be able to choose the correct response. Circle the number below the appropriate percentage range under the heading "% in province that should get item correct."

3. If you wish to comment on the test or on the item rating procedure, please use the attached comment sheet.

Thank you for your assistance in setting standards for the interpretation of the achievement test results.

Please give this form to your principal so that it can be returned with the achievement tests to the Student Evaluation Branch.

My class is _____ (1) above average ____ (2) average _____ (3) below average

Item No.	Correct Response				% in class that will get item correct					% in province that should get item correct				
	A	B	C	D	0-20	21-40	41-60	61-80	81-100	0-20	21-40	41-60	61-80	81-100
1.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
2.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
3.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
4.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
5.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
6.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
7.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
8.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
9.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
10.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
11.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
12.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
13.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
14.	1	2	3	4	1	2	3	4	5	1	2	3	4	5
15.	1	2	3	4	1	2	3	4	5	1	2	3	4	5

COMMENTS

APPENDIX III

EXAMINATION DEVELOPMENT PROCESS

STUDENT EVALUATION BRANCH

ALBERTA EDUCATION

From the time an examination is conceived to the time it is administered, many individuals are involved: practising classroom teachers, student evaluation personnel, curriculum and field services personnel, educational administrators, and representatives of post-secondary institutions. Writing questions and structuring examinations are extremely complex tasks requiring extended periods of time for completion. Following is a brief summary of the various phases of the test development procedure used by the Student Evaluation Branch, Alberta Education.

PHASE ONE: PLANNING

The first phase in the development of an examination begins with a review of the learning objectives prescribed by Alberta Education through a particular program of study and an assessment of the appropriate curriculum specifications prepared under the direction of the Curriculum Branch.

Test developers then prepare tentative examination specifications (specific learning objectives to be tested) through an interim blueprint (an overall plan used to guide the development of an examination). Questions posed by test developers at this point are:

- Who will take the test and for what purposes?

- What types of questions will constitute the examination (machine scored, short answer, or extended written response)?

- What knowledge, skills, and attitudes can students be expected to possess?

- How long and how demanding should the examination be?

- How and to whom should the results of the examination be reported?

So that examination results will be reliable and can be reported meaningfully, multiple-choice sections of the examinations must contain a minimum of six items testing any particular type, or domain, of a learning objective. In addition, the range of difficulty of multiple-choice items is expected to vary from .30 to .85*, and the overall mean of such items is expected to be .625*.

Once decisions have been made concerning blueprints, and the choice of item forms and examination format has been determined, test developers plan procedures for item development. First, existing items are checked for "fit" against the interim blueprint and any deficiencies in the item pool are noted. Then, committees of classroom teachers practising at the appropriate grade level are formed, and meeting dates are arranged. Test developers prepare manuals and in-service procedures that will guide the work of these committees in the development of items that will eliminate any noted deficiencies in the pool of existing items.

After agreement within the Student Evaluation Branch, the interim blueprint is brought before an inter-branch committee consisting of the appropriate Associate Director of Curriculum (or of Language Services), Field Services consultants, and the members of the test development team. This committee reviews the planning that has been carried out and makes recommendations.

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* Generally, no fewer than 30 per cent of the students will answer the most difficult item correctly, and no more than 85 per cent of the students will answer the easiest item correctly.

** The expected mean of an examination or test section consisting of multiple-choice items containing four alternatives should be 62.5 per cent, the mid point between chance selection (25 per cent) and perfection (100 per cent).

PHASE TWO: BLUEPRINT APPROVAL

Once there is agreement within Alberta Education as to the proposed nature of the examination, the blueprint is reviewed and recommended for approval by a Technical Review Committee consisting of members nominated by various stakeholder groups (the Alberta Teachers' Association, the Conference of Alberta School Superintendents, the post-secondary institutions, and Alberta Education). This committee makes recommendations to the Director of Student Evaluation. Its role is advisory in nature.

At this point in the procedure, an information bulletin describing the examination, including sample questions and items, is prepared. This bulletin is meant for distribution to educators, and to the public at large, well in advance of the administration date of the examination.

PHASE THREE: ITEM DEVELOPMENT

The committees of practising classroom teachers formed during the planning phase of the examination development procedure now meet, under the supervision of Student Evaluation Branch personnel, to develop new items. Where necessary, item builders are trained in the principles of item constuction. Once they have had in-service training, item builders work as a group or individually and, when possible, meet to review, revise, and validate the items they have written.

New items built in commitee are then screened for format, validity, blueprint "fit," and other design considerations. Copyright approval is sought for testing stimuli such as literary passages, political cartoons, graphs, and charts.

PHASE FOUR: FIELD TESTING

Items are then compiled and placed in field tests which are submitted to a strict regimen of quality control including further validity checking, editing, proofreading, and key checking. Any required art work is completed during this phase of the procedure.

With appropriate permission, field testing is carried out on a sample of the student population for which the examination has been designed, usually intact classes which have completed the portion of the curriculum covered by the field test. A desired minimum of 150 students writes each field test.

The results of each field test are then analyzed and the statistics or item analyses are scrutinized to determine whether or not individual items require further revision.

PHASE FIVE: ITEM REVISION AND VALIDATION

Items judged to require further changes on the basis of field test results are revised and resubmitted for further field testing.

Field tested items having potential for future use are given a further validity check, this time by a validation committee consisting of classroom teachers practising at the appropriate grade level and a representative from a post-secondary institution.

PHASE SIX: PILOT TEST CONSTRUCTION

Once a pool of validated items is available, a pilot test is constructed which follows the approved blueprint and parallels the final examination in content, format, and design.

Pilot tests, like field tests, are submitted to a strict regimen of quality control - validity checking, editing, proofreading, and key checking.

After the pilot test has been constructed, it is brought before a second meeting of the inter-branch committee, consisting of the appropriate Associate Director of Curriculum (or of Language Services), Field Services consultants, and the members of the test development team. This committee reviews the pilot test and makes recommendations.

PHASE SEVEN: PILOT TEST APPROVAL

The Technical Review Committee which has approved the examination blueprint in Phase Two of the Examination Development Procedure meets a second time to review and recommend for approval the pilot test and administration instructions. It is at this point that the Technical Review Committee sets standards of achievement appropriate for the pilot test, including marking standards, if the test includes short answer items or extended writing. Again, this committee makes recommendations to the Director of Student Evaluation.

PHASE EIGHT: PILOT TESTING

The pilot test is then administered to an appropriate sample of the student population for which the examination has been developed, one which has received the proper level of instruction, is properly motivated, and is representative of the ability distribution in the population. A minimum of 250 students writes the pilot test.

Final revisions are made on the basis of information collected as a result of the pilot test administration. If major revisions have been made, the Technical Review Committee is reconvened to scrutinize these changes.

The information bulletin prepared during Phase Two of the Examination Development Procedure is now finalized, printed, and distributed.

PHASE NINE: PREPARATION AND ADMINISTRATION OF THE FINAL EXAMINATION FORM

The examination is submitted for final quality control procedures, including editing, proofreading, and a final key checking.

The examination is then sent to a commercial printer, prepared, distributed for administration, and administered.

PHASE TEN: ANALYZING AND REPORTING THE RESULTS

The results of the final examination are then analyzed. The Technical Review Committee reconvenes to review and recommend for approval, the results of the examination. The standards of achievement previously set may be reconsidered in light of the results.

A variety of reports are prepared - the Summary Report, the Provincial Report, Jurisdiction Reports, and the Branch Technical File. These reports vary in depth of reporting and in intended audience.

TEST DEVELOPMENT PROCEDURE TIMELINES

TEST DEVELOPMENT PHASES		SPECIFIC EXAMPLE (GRADE 9 L.A. ACHIEVEMENT)	GENERAL NEEDS (ACHIEVEMENT TESTS)
PHASE ONE:	PLANNING	NOVEMBER 1982 - JANUARY 1983	MONTH 1 - 3
PHASE TWO:	BLUEPRINT APPROVAL		
PHASE THREE:	ITEM DEVELOPMENT	FEBRUARY - MAY 1983	MONTH 4 - 7
PHASE FOUR:	FIELD TESTING	JUNE 1983	MONTH 8
PHASE FIVE:	ITEM REVISION AND VALIDATION	JULY - SEPTEMBER 1983	MONTH 9 - 11
PHASE SIX:	PILOT TEST CONSTRUCTION	OCTOBER 1983	MONTH 12
PHASE SEVEN:	PILOT TEST APPROVAL		
PHASE EIGHT:	PILOT TESTING	JUNE 1984	MONTH 20
PHASE NINE:	CONSTRUCT AND ADMINISTER FINAL EXAM FORM	JUNE 1985	MONTH 32
PHASE TEN:	ANALYZING AND REPORTING RESULTS	JULY - AUGUST 1985	MONTH 33 - 34

APPENDIX IV

TECHNICAL REVIEW COMMITTEES

FOR THE

ACHIEVEMENT TESTING PROGRAM

A Technical Review Committee will be established for each of the following major subject areas:

Language Arts	Science
Mathematics	Social Studies

Purpose of the Committees

The purpose of each committee will be to review the total examination process (i.e., development, administration, scoring, and reporting) and make such recommendations as they deem appropriate to the Director of Student Evaluation of Alberta Education.

Terms of Reference

Each committee, under the chairmanship of an Associate Director of the Student Evaluation Branch, will carry out the following responsibilities:

1. Review and recommend for approval the following for each Achievement Test to be administered:
   (a) a blueprint and standards for the test
   (b) general administration of the test
   (c) scoring system for written response portion
   (d) final draft of the test
2. Review the results and standards of the Achievement Test.
3. Consider any other matters referred to it by the Director of the Student Evaluation Branch.

Structure of the Committees

Each committee will be composed of:

1. A chairman appointed by the Director of Student Evaluation.
2. A member nominated by the Assistant Deputy Minister of Program Development.
3. A member nominated by the Assistant Deputy Minister of Program Delivery.
4. A selected representative of post-secondary institutions.
5. Two members nominated by the Alberta Teachers' Association who have demonstrated an interest and expertise in the subject area, but who are not engaged in teaching the specific course being examined.
6. A member nominated by the Conference of Alberta School Superintendents.

Term of Office

Each Technical Review Committeee will be a standing committee of the Student Evaluation Branch. Each member will hold office for a term of one, two, or three years as determined by the Director of Student Evaluation. At the conclusion of a member's term, the respective organization will be invited to review their representation and to reconfirm or resubmit their nomination.

STUDENT EVALUATION BRANCH

March 10, 1983